Story by Ric Jensen

Training days

TWRI coordinates water resources training programs

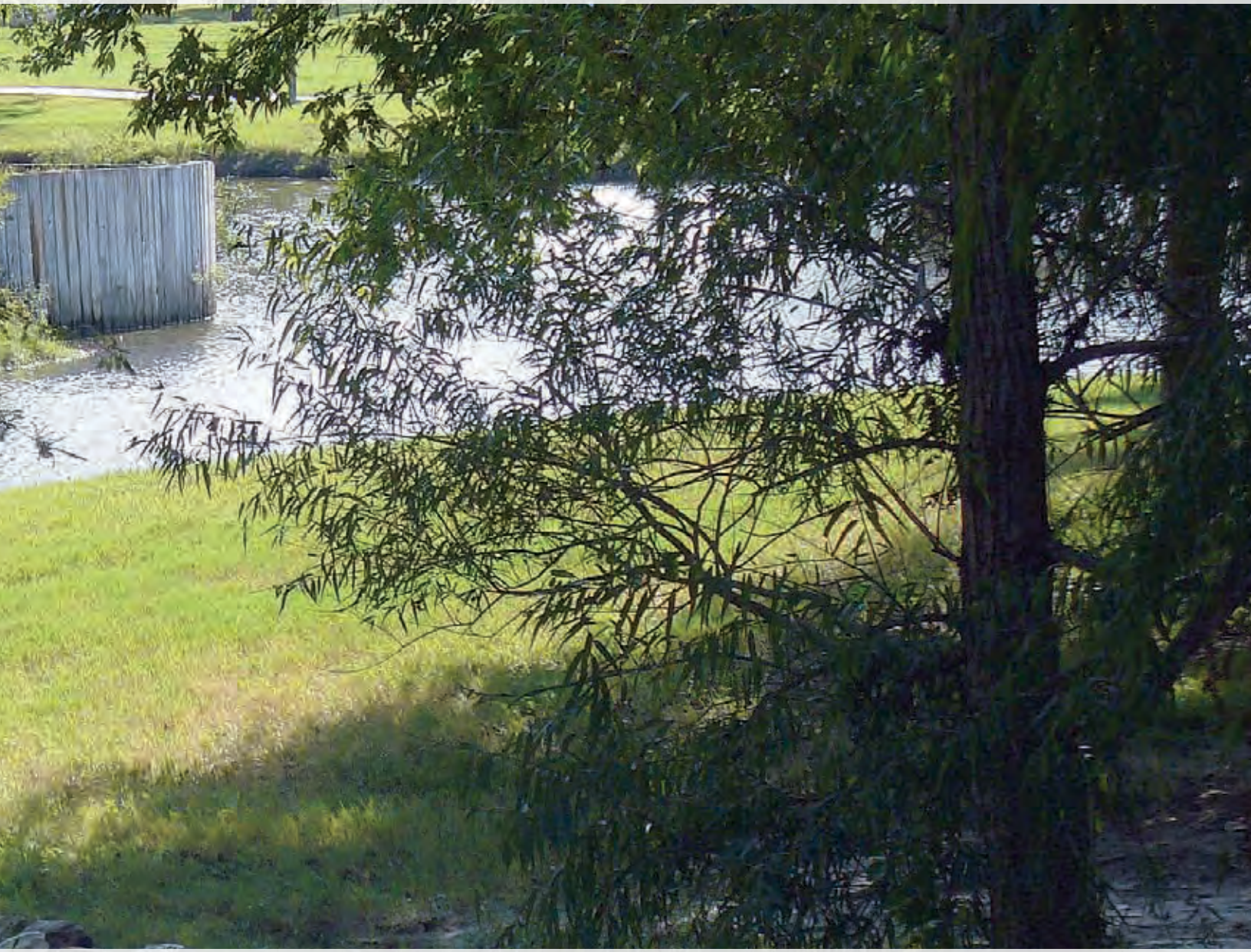

Photo by Danielle Supercinski, Texas Water Resources Institute

Helping water professionals learn how to manage water resources is the goal of new training programs coordinated by the Texas Water Resources Institute (TWRI).

TWRI is working with Texas A&M University's Spatial Sciences Laboratory (SSL), Zachry Department of Civil Engineering, and the Texas AgriLife Blackland Research and Extension Center at Temple to market and administer short courses on water-related geographic information systems, remote sensing technology, and computer simulation models. Planned or anticipated topics include the Soil and Water Assessment Tool (SWAT), Agricultural Policy Economic Extender (APEX), Water Rights Analysis Package (WRAP), and EPANET.

In other training programs, the institute is working with Texas AgriLife Research, Texas AgriLife Extension Service, state and federal agencies, and various universities to conduct training programs in watershed protection planning (see separate story on page 6) and irrigation training (see separate story on page 10). ⇨

"We want to provide water resources professionals with the latest technologies and products of university research," TWRI Director Dr. Allan Jones said. "Training courses are one of the most effective methods of transforming scientific knowledge from the universities so it can be used by the public."

Dr. Ralph Wurbs, associate director of engineering for the institute and a professor of water resources engineering in Zachry Department of Civil Engineering, agreed.

"Continuing education is essential to professional practice," said Wurbs, who will teach the WRAP courses. "Training courses allow practitioners to efficiently gain proficiency in applying new innovations in technology, computer modeling, and water management strategies."


Wurbs

Dr. Raghavan Srinivasan, SSL director and instructor for the SWAT model courses, emphasized that newly developed models give professionals expanded capabilities to better manage water resources.

"We are developing several state-of-the-art water resources models and management tools that professionals throughout the world are using to increase their capability to make more informed decisions about issues related to water quality, land management, water use, and other critically important topics," Srinivasan said. "Training courses create an excellent learning opportunity that brings together the scientists who are creating modeling tools and the experts who use them. Feedback from the users can help to improve the models."

The training courses are designed to provide intensive hands-on instruction, walk users through model fundamentals, and answer questions.

Dr. Kelly Brumbelow, an assistant professor of water resources engineering, plans on teaching courses on models to manage water distribution systems, such as EPANET.

"Because of the rapid pace of changes in technology, the 'shelf-life' of an engineering degree is just a few years now," Brumbelow said. "Because of our role in developing and evaluating new technology, Texas A&M faculty are especially suited to deliver the latest knowledge to practicing professionals.

Photo by Jerrold Summerlin, AgriLife Communications and Marketing

Dr. Raghavan Srinivasan, director of Texas A&M University's Spatial Science Laboratory and professor in the Department of Ecosystem Science and Management, teaches an advanced Soil and Water Assessment Tool (SWAT) course to students. Srinivasan travels worldwide to conduct SWAT courses.

"I'm excited about the chance to offer courses in water distribution modeling because of the great need we have in Texas to build new distribution infrastructure as well as maintain and rehabilitate our older systems."

TWRI will support participating faculty by developing curriculum materials, handling logistics, and administering continuing education credits. Courtney Snyden was hired to help administer and market the courses. Faculty and staff will focus on model development and training as TWRI assumes a greater role in administering these courses, Jones said.

Efforts are also under way to create web-based training modules to prepare students to take the advanced training courses. Modules currently being developed will provide an overview of natural resources and agricultural processes that are simulated by SWAT and APEX and will describe how to reclaim damaged soils.

For more information, go to: http://twri-training-courses.tamu.edu.

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—Dr. Allan Jones, TWRI Director